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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Markku Leskela

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EXAMINER

CORDRAY, DENNIS R

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,481	Applicant(s) LESKELA ET AL.	
	Examiner DENNIS CORDRAY	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-11 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-11 and 13-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/6/2009 has been entered.

Response to Arguments

Applicant's arguments filed 4/6/2009 have been fully considered but they are not persuasive.

Applicant argues that the disclosure and examples therein show that the instant invention provides surprisingly great improvements. Applicant further argues that no reasoning has been provided for a person of ordinary skill in the art to conclude that the variety of compositions encompassed by the claims would not behave in a similar manner as the tested paper.

As discussed in the previous Final Action, the showing consists of two examples of three-layered papers (basis weight 35-37 gsm) having outer layers comprising SuperFill® filler containing 67.5% PCC and made according to Example 1 of FI Patent Specification No. 100729. These papers were compared to similar three-layered papers having outer layers comprising a commercial PCC filler and with a single-layer

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paper comprising SuperFill® filler. The filler content in the sheets was 12-15%. In another set of comparisons, one-layer sheets having a basis weight of 62 gsm were made using a commercial PCC or SuperFill® fillers containing varying amounts of PCC.

The showing is not commensurate in scope with the claimed invention and is not convincing for the following reasons. A translation of FI Patent Specification No. 100729 is not provided for review, thus it is not known if the composition of the SuperFill® filler used lies within the scope of the instant claims. Also, the showing using a single filler of unknown composition in two similar 3-layered paper products is not commensurate in scope with the claims, which embody 3-layered papers having a broad range of gramages and containing a broad range of weight distribution between layers, the outer layers having any percentage of a filler, which is made from fibrils having a broad range of physical dimensions and having a broad range in percentage of any of a variety of light scattering material particles of differing chemical composition deposited on them. The examples comparing one-layer papers with filler throughout cannot support advantages of multilayer papers having filled surface layers.

As a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes and using the variety of materials put before it and then obtain prior art products and make physical comparisons therewith.

Whether the unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, the "objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support." In other words, the showing of unexpected results must be reviewed to see if the results

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occur over the entire claimed range. In re Clemens, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980). (Claims were directed to a process for removing corrosion at “elevated temperatures” using a certain ion exchange resin (with the exception of claim 8 which recited a temperature in excess of 100C). Appellant demonstrated unexpected results via comparative tests with the prior art ion exchange resin at 110C and 130C. The court affirmed the rejection of claims 1-7 and 9-10 because the term “elevated temperatures” encompassed temperatures as low as 60C where the prior art ion exchange resin was known to perform well. The rejection of claim 8, directed to a temperature in excess of 100C, was reversed.). See also In re Peterson, 315 F.3d 1325, 1329-31, 65 USPQ2d 1379, 1382-85 (Fed. Cir. 2003) (data showing improved alloy strength with the addition of 2% rhenium did not evidence unexpected results for the entire claimed range of about 1-3% rhenium); In re Grasselli, 713 F.2d 731, 741, 218 USPQ 769, 777 (Fed. Cir. 1983) (Claims were directed to certain catalysts containing an alkali metal. Evidence presented to rebut an obviousness rejection compared catalysts containing sodium with the prior art. The court held this evidence insufficient to rebut the prima facie case because experiments limited to sodium were not commensurate in scope with the claims).

In accordance with MPEP 804, the Provisional Double Patenting rejections will continue to be made as long as there are conflicting claims in more than one application unless the “provisional” double patenting rejection is the only rejection remaining in at least one of the applications.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 13 recites that “a mechanical pulp, which is coarser than that used for forming one surface layer, optionally is used for forming the other surface layer.”

The instant Specification discloses multilayer products and clearly distinguishes between surface layers, which contain the claimed filler, and back layers, bottom layers or middle layers, which are not disclosed as having the claimed filler (p 3, lines 11-24; p 6, lines 6-8; p 7, lines 28-29; p 8, lines 10-29). The back layers, bottom layers or middle layers can be made using different fibers or pulps than the surface layer(s) (p 9, lines 5-12; p 9, line 31 to p 10, line 8; p 10, lines 24-27).

From the instant Specification, p 10, lines 24-27: “A particularly preferred embodiment of the present invention comprises the base paper of LWC paper. Here, both the bottom layer and the surface layer/layers comprise a mixture of chemical cellulose pulp and mechanical pulp, whereby the bottom layer is formed using mechanical pulp, which is coarser than the pulp used for forming the surface layer.” In

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this particularly preferred embodiment, the bottom layer is formed from a coarser mechanical pulp, but is distinguished from the surface layer(s) (which contain the claimed filler). There is no teaching that one surface layer containing the claimed filler is made from a different mechanical pulp than the other surface layer containing the claimed filler as required by the claims, no examples are given of such an embodiment, and one of ordinary skill in the art would not deduce such an embodiment from reading the instant Specification.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3-11 and 13-15 are rejected under 35 U.S.C. 103(a) as being anticipated by Silenius et al (US 2004/0168779) in view of Ruf et al (EP 0824157, certified translation enclosed and used herein) and further in view of Peel et al (Paper Science and Paper Manufacture).

Claims 1, 7, 10, 11 and 13: Silenius et al ('779) discloses a process for producing a multilayered fibrous product having a grammage of about 50 to 500 g/m², the process comprises fitting on top of a fibrous backing layer a filler-containing fibre layer, which forms the surface of the fibre product and covers the back layer. Three layered structures are disclosed (p 3, par 41).

The top layer is formed from slush of fibre material, to which a product comprising cellulose or lignocellulose fibrils, on which light scattering material particles have been precipitated, is added as a filler (Abs; p 1, pars 1, 3 and 16; p 3, pars 39 and 43; claim 12). The amount of light scattering particles deposited on the filler is from approximately 0.1 to 90% by weight of the amount of filler (p 2, par 31). The disclosed filler provides the advantages of good retention, lower grammage and increased opacity and formation over layers made using mineral fillers (pp 1-2, par 17; p 3, par 44).

Silenius et al ('779) discloses that the surface and back layers can be produced from chemical and mechanical pulps (p 3, pars 43 and 46).

Silenius et al ('779) does not disclose forming the multilayered product using the claimed multilayer forming process. Silenius et al ('779) also does not disclose a fiber layer containing a filler on both sides of a middle fiber layer or that the middle and surface layers each comprise a mixture of chemical and mechanical pulps. Note that the use of a coarser mechanical pulp in one of the surface layers is optional.

Ruf discloses a process for forming a multilayer fibrous web, which can be a printing paper comprising surface layers loaded with a filler, using a multilayer forming process in the form of a headbox having multiple fiber suspension feeds. The suspensions supplied to the outer layers are loaded with a filler and serve the purpose of improving the printability of the web. In some embodiments, fibrous suspension feeds with larger amounts of fillers contained in the outer (surface) layers are introduced through separate conduits and combined in the nozzle (immediately before the lip of the headbox). The process produces papers with higher amounts of filler at the surfaces

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resulting in better printability and low filler content in the center layer resulting in higher strength. Ruf et al also discloses that implementing the desired surface characteristics in the boundary layers keeps the cost of additives low (p 3, first two pars and last par bridging to p 4; p 4, last par; pp 5-6, all; p 7, 1st par; p 8, last par, p 9, 1st par; p 13, last 4 pars describing Fig. 1, reference numbers 26-28; p 14, 2nd par; p 15, middle pars describing Fig. 2, reference numbers 44-46; p 20, middle pars describing Fig. 8, Fig. 8).

Ruf et al does not disclose that the middle and two surface layers each comprise a mixture of chemical and mechanical pulps.

Peel et al teaches that typical fiber compositions for printing papers comprise mixtures of chemical and mechanical pulp (Table 2.2).

The art of Silenius et al ('779), Ruf et al, Peel et al and the instant invention is analogous as pertaining to making multilayered fibrous webs and printing paper. It would have been obvious to one of ordinary skill in the art to form a three-layered paper having a fiber layers comprising the claimed filler on both sides of a center layer in the process of Silenius et al in view of Ruf et al and further in view of Peel et al to provide a paper with better formation, opacity and printability and to keep costs lower. It would also have been obvious to use the claimed multilayered headbox to form the multilayered paper as a functionally equivalent method to form papers having surface layers comprising fillers. Using mixed chemical and mechanical pulps in each layer would have been obvious as typical fiber compositions used for printing paper.

Claims 3-4: Silenius et al ('779) discloses that the filler comprises cellulose or lignocellulose fibrils produced by refining cellulose or mechanical pulp fibers. The fibrils

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have an average thickness of is less than 5 μm and correspond to a fraction that passes a 100-Mesh screen (thus inherently pass a 50-Mesh screen) or have an average thickness of from 0.1 to 10 μm and an average length from 10 to 1500 μm (p 1, pars 11 and 13; p 2, pars 27-29).

Claims 5-6: Silenius et al ('779) discloses that the light scattering particles are precipitated in an aqueous phase, and can be calcium carbonate, calcium sulphate, barium sulphate and calcium oxalate (p 1, par 13).

Claims 8, 9 and 14-15: Silenius et al ('779) discloses that the distribution of weight between the top (surface) layers and back (middle) layers is about 20:80 to 40:60 (p 3, par 44). From the disclosed distribution and range of grammages disclosed for the multilayer product, products are embodied having grammages of the surface layer that overlay the claimed range.

Claims 1, 3-11 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruf et al in view of Silenius et al (US 2001/0000063) and further in view of Peel et al (Paper Science and Paper Manufacture).

Ruf discloses a process for forming a multilayer fibrous web, which can be a printing paper comprising surface layers loaded with a filler, using a multilayer forming process in the form of a headbox having multiple fiber suspension feeds. The suspensions supplied to the outer layers are loaded with a filler and serve the purpose of improving the printability of the web. In some embodiments, fibrous suspension feeds with larger amounts of fillers contained in the outer (surface) layers are introduced

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through separate conduits and combined in the nozzle (immediately before the lip of the headbox). The process produces papers with higher amounts of filler at the surfaces resulting in better printability and low filler content in the center layer resulting in higher strength. Ruf et al also discloses that implementing the desired surface characteristics in the boundary layers keeps the cost of additives low (p 3, first two pars and last par bridging to p 4; p 4, last par; pp 5-6, all; p 7, 1st par; p 8, last par, p 9, 1st par; p 13, last 4 pars describing Fig. 1, reference numbers 26-28; p 14, 2nd par; p 15, middle pars describing Fig. 2, reference numbers 44-46; p 20, middle pars describing Fig. 8, Fig. 8).

Ruf et al does not disclose the claimed filler, the grammage of the paper or the claimed fiber composition of each layer. Note that the use of a coarser mechanical pulp in one of the surface layers is optional.

Silenius et al ('063) discloses a filler used in paper manufacture comprising a comprising calcium carbonate aggregates (light scattering particles) precipitated from an aqueous solution onto cellulose noil fibrils (Abs; p 2, pars 23, 26 and 27). The mass ratio of calcium carbonate to noil fibrils is from 13.5% to 2700%, which significantly overlays the claimed range of a maximum of 85% (Claim 6). Silenius et al ('063) teaches multiple advantages of using the inventive filler, including higher retention of the calcium carbonate over conventional precipitated calcium carbonate, better optic properties, greater strength, lower grammage and reduced overall paper manufacturing costs over prior art calcium carbonate based fillers (p 1, pars 6-11).

Silenius et al ('063) discloses that the noil fibrils are produced by refining cellulose fibers, have a thickness from 0.1-2 μm , a length from 10-400 μm and have a

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preferred screened fraction of from P100 -P400, or from 100 to 400 Mesh (p 1, par 15; p 2, pars 24, 25 and 27). The fibril dimensions significantly overlap the claimed dimensions. Fibrils passing through a 100 Mesh screen will inherently pass through a 50-Mesh screen.

Silenius et al ('063) does not disclose the grammage of the paper or the claimed fiber composition of each layer.

The grammage printing papers in the art is typically from about 40 to 150 g/m² (Peel et al, pp 18-19, Table 2.2). Peel et al also teaches that typical fiber compositions for printing papers comprise mixtures of chemical and mechanical pulp.

The art of Ruf et al, Silenius et al ('063), Peel et al and the instant invention is analogous as pertaining to fillers used in printing papers. It would have been obvious to one of ordinary skill in the art to use the claimed filler in the product of Ruf et al view of Silenius et al ('063) to obtain a surface layer having good optical properties, strength and retention and to reduce the costs of paper manufacturing. Making a printing paper of the claimed grammage would also have been obvious to one of ordinary skill in the art a typical grammage in the art for such papers. Using mixed chemical and mechanical pulps in each layer would further have been obvious as typical fiber compositions used for printing paper.

Ruf et al does not disclose the grammage of the separate layers or their respective weight ratios. Ruf et al does disclose that the distribution of fibrous suspension to the boundary areas (surface layers) that brings better printing qualities, and a fibrous suspension to the middle of the sheet that brings about higher strength or

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mechanical characteristics can be optimally coordinated with the desired paper quality.

Ruf et al also discloses that implementing the desired surface characteristics in the boundary layers keeps the cost of additives low. Thus, the composition and grammage of the surface and middle layers are result effective variables (at least, such would have been realized by one of ordinary skill in the art). Absent convincing evidence of unobvious results due to the thickness of the layers and commensurate in scope with the claimed invention, it would have been obvious to one of ordinary skill in the art to form surface layers of the claimed grammage and obtain the claimed ratios between surface and middle layers through routine optimization to provide desired characteristics to the paper and to minimize costs.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 4 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 12 of copending Application No. 10/475773 in view of Ruf et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending application and those the instant invention recite multilayered fibrous products comprising the same filler. The instant claims recite the grammage of a paper, thus are a species of the copending claims. It would have been obvious to one of ordinary skill in the art to make a paper of the claimed grammage using the process of the copending application as a typical grammage used in the art. It would also have been obvious to use the multi-layer headbox of Ruf et al to form the paper.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DENNIS CORDRAY whose telephone number is (571)272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dennis Cordray/
Examiner, Art Unit 1791

/Eric Hug/
Primary Examiner, Art Unit 1791